U.S. Representative Gregg Harper

FY 2010
Requests to Defense
Appropriations Subcommittee

Project Name: Regional Counter Drug Training Academy
Proposed Recipient: Naval Air Station, 219 Fuller Road, Meridian, Mississippi 39309
Amount Requested: $3,000,000
Project Description: The National Guard Bureau identified a Fiscal Year 2009 unfunded requirement of $24.2M for Counterdrug (CD) Schools. With appropriate funding, CD schools will also be better positioned to provide counter narcotics-based training programs critical to domestic law enforcement against Narcoterrorism. The RCTA Meridian budget has shown little growth since FY2000, yet the costs associated with training law enforcement officers have increased by approximately 20%.

Project Name: Advanced, Long Endurance Unattended Ground Sensor Technologies
Proposed Recipient: Mississippi State University, P.O. Box 6301, Mississippi State, MS 39762
Amount Requested: $4,200,000
Project Description: A significant challenge in modern military operations is the ability to achieve and maintain real-time battlefield situational awareness. Achieving battlefield situation awareness requires the ability to robustly and persistently monitor the movements of the adversary in near real-time across a wide range of operational environments including foliage, mountainous, and urban terrain. This initiative is a follow-on effort to ongoing Mississippi State University Unattended Ground Sensor (UGS) research and development in support of the U.S. Special Operations Command (USSOCOM).

Project Name: F-15C AESA Radar for Air National Guard (ANG)
Proposed Recipient: Raytheon, 19859 Highway 80, Forest, Mississippi 39074
Amount Requested: $62,400,000
Project Description: The F-15C Active Electronically Scanned Array (AESA) Radar upgrade is number one on the Air National Guard's Fiscal Year 2010 Critical Combat Capabilities List. The ANG requires a minimum of 48 total AESA systems for constant Homeland Defense presence throughout the US. In addition to Air Expeditionary Forces (AEF) commitments, ANG F-15s support 24-hour Air Sovereignty Alert (ASA) in defense of the American homeland and represent 40% of all ASA assets. The F-15 AESA Radar replaces the current mechanically scanned radar that has been identified by the National Guard Bureau as being logistically unsupportable due to obsolescence of parts.

Project Name: VePro - Health Usage Monitoring and Vehicle Prognostics
Proposed Recipient: nCode International, 200 Research Blvd., Starkville, MS 39759
Amount Requested: $4, 400,000
Project Description: Better understanding of operational usage severity is critical for vehicle designs to reliably meet needs at minimum cost and weight. VePro will save billions of dollars spent annually on maintaining U.S. Army equipment, improve readiness and reduce danger to soldiers from unexpected vehicle failures. The next stage is to evolve these into scalable, robust cost effective pre-production Vehicle Health Management Systems (VHMS) ï technology configuration, manufacturing, assembly and testing for pre-production systems.

Project Name: Silicon Carbide (SiC) Electronics Material Producibility Initiative
Proposed Recipient: II-VI Wide Band Gap Materials Group, 201 Research Blvd., Starkville, MS 39759
Amount Requested: $5,000,000
Project Description: Funding will be used to develop technology, and establish production capability, along with evaluation and testing of SiC materials and integrated circuits for use in high power, high frequency DoD weapons systems and platforms. Future mission requirements dictate a range of current and next-generation US Military systems requiring critical high frequency and high power components with dramatically enhanced capabilities which are un-attainable with current technology.

Project Name: Air National Guard/United States Air Force F-16 Center Pedestal Display and Active Electronically-Scanned Array (AESA) Radar
Proposed Recipient: Raytheon, 19859 Highway 80, Forest, Mississippi 39074
Amount Requested: $4,700,000
Project Description: The Center Pedestal Color Display (CPCD) and Active Electronically Scanned Array (AESA) Radar are the number three and four Air National Guard unfunded requirements (FY10 ANG Weapons Modernization List). The CPCD will enable pilots to more effectively communicate critical real time information in the battle field. Without an AESA upgrade to ANG F-16s, pilots will remain unable to effectively locate, identify and engage surface targets through the weather, employ in a dense jamming environment, and perform air sovereignty intercepts against the full spectrum of threats.

Project Name: Simulation Based Reliability Systems (SimBRS)
Proposed Recipient: Mississippi State University, P.O. Box 5405, Mississippi State, MS 39759
Amount Requested: $5,000,000
Project Description: SimBRS engages in synergized research to develop experimentally validated cradle-to-grave modeling and simulation capabilities to optimize reliability in vehicular components and systems with consideration of uncertainties in input loads, manufacturing, operations and maintenance, and

material properties to decrease weight and cost, and yet increase the performance, durability, and safety of the warfighter. This initiative is a follow-on effort to ongoing Mississippi State University simulation based reliability systems research.

Project Name: On-Board Hybrid Power Unit (OBHPU)
Proposed Recipient: Diversified Technology Incorporated, 476 Highland Colony Parkway, Ridgeland, MS 39157
Amount Requested: $1,500,000
Project Description: The Onboard Vehicle Power system (OBVP) concentrated on the conduction cooled 10 KW and liquid cooled 30 KW systems OBVP system. 2010 funding will ensure the completion of, field-testing, development, integration plan and a training program for the production version of the OBHPU 10KW system. The Space and Missile Defense Command (SMDC) supports the OBHPU program to provide on-board electric power to deployed radar and missile systems, and is applicable in many other fields.

Project Name: F-15C AESA Radar Classified Demo Follow-On
Proposed Recipient: Raytheon, 19859 Highway 80, Forest, MS 39074
Amount Requested: $12,000,000
Project Description: Funding has not been secured for the final year of a three-year development effort to demonstrate APG-63(V)3 Active Electronically Scanned Array (AESA) classified capability with a Radar Common Data Link (RCDL). ANG and USAF F-15s are the backbone of forces assigned to perform a significant portion of the nation's Homeland Defense mission, protecting the United States from attack by an airborne threat. FY10 funding will complete the third and final phase of the three-year RCDL demonstration program.

Project Name: Advanced Materials Design for Nano Devices
Proposed Recipient: Mississippi State University, P.O. Box 5167, Mississippi State, MS 39762
Amount Requested: $2,230,000
Project Description: Mississippi State University will conduct transformative research to develop unique and innovative materials and magnetic memory elements for high-density nanoscale memory devices and nanosensors for detection of chemical warfare agents in support of the Nano Electronics Team of Sensor and Electron Devices Directorate (SEDD) at the U.S. Army Research Laboratory (ARL). The innovative and cutting-edge technologies developed in this proposal will be crucial in achieving both the short- and long-term missions of the Department of Defense and Department of Homeland Security.

Project Name: Silicon Carbide Power Electronics for More Electric Aircraft
Proposed Recipient: SemiSouth Laboratories, Inc., 201 Research Blvd, Starkville, MS 39759
Amount Requested: $5,000,000

Project Description: The Mach 2 & Mach 4 TMS Study Identified SiC as a Critical Technology for Versatile Affordable Advanced Turbine Engines Program (VAATE). The F35 (JSF) program office has documented that the continued development of silicon carbide power electronics technology will address a critical need to reduce weight and expense associated with conventional more-electric-aircraft technology available to this program. Air Force and other joint funding is beginning system integration and technology readiness level demonstrations that in some cases depend on the continued maturation of the underlying technology funded by this project.

Language Request

Agency: Defense Health Program
Account: Defense Health Program
Exact Language: Peer Reviewed Medical Research Program (PRMRP) - The DoD is strongly encouraged to expand the PRMRP to include Fragile X Syndrome and Associated Disorders in the eligible research topics for FY 2010 portfolio. These funds will advance translational research into Fragile X Syndrome and Associated Disorders, including research examining the relationship among Fragile X syndrome, autism, and autism spectrum disorders (ASD).